

sensor and a heater installed on the back face side of the fluid contacting surface of said corrosion-resistant substrate, and a pressure sensor part comprising a thin film forming a strain sensor element installed on the back face side of the fluid contacting surface of the corrosion-resistant metal substrate.

[2] A corrosion-resistant metal made sensor for fluid as claimed in Claim 1 wherein it is so constituted that a corrosion-resistant metal substrate is fitted into the mounting groove of a corrosion-resistant metal made sensor base in a state in which its fluid contacting surface is exposed outwardly, and the peripheral edge of the corrosion-resistant metal substrate is hermetically welded to the sensor base.

[3] A corrosion-resistant metal made sensor for fluid as claimed in Claim 1 or Claim 2 is so made that the output drift to the pressure of the mass flow rate sensor part is corrected by the output of the pressure sensor part.

[4] A corrosion-resistant metal made sensor for fluid as claimed in Claim 1, Claim 2 or Claim 3 is so made that a thin film is constituted with an insulation film formed on the back side of the fluid contacting surface of the corrosion-resistant metal substrate, a metal film which forms a temperature sensor, a heater and a

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strain sensor element, and a protection film to cover the insulating film and the metal film.

[5] A fluid supply device for which the corrosion-resistant metal made sensor for fluid is employed characterized by that a corrosion-resistant metal made sensor for fluid stipulated in one of Claims 1 to 4 is mounted on a fluid controller in order that the flow rate and pressure can be appropriately checked at the time of the fluid control.

[6] A fluid supply device for which the corrosion-resistant metal made sensor for fluid is employed characterized by that it is so constituted that a sensor base of the corrosion-resistant metal made sensor for fluid in Claim 2 is positioned inside the fluid passage of a body equipped with the aforementioned fluid passage for communicating between the flow-in inlet for the fluid and the flow-out outlet for the fluid by installing a metal gasket in order that hermeticity between the body and the sensor base is held by thrusting by